WHAT IS CLAIMED IS:

1. An isolated transgenic cell having a mutant $p27^{Kip1}$ gene lacking a Cdk2 phosphorylation site, wherein the mutant $p27^{Kip1}$ gene encodes a mutant $p27^{Kip1}$ polypeptide having a longer half-life in S phase than wildtype $p27^{Kip1}$ polypeptide.

2. The transgenic cell of claim 1, wherein the mutant $p27^{Kip1}$ polypeptide inhibits Cdk2 *in vitro* kinase activity.

3. The transgenic cell of claim 1, wherein the mutant $p27^{Kip1}$ polypeptide is $p27^{T187A}$.

4. The transgenic cell of claim 1, wherein the mutant $p27^{Kip1}$ gene is located at an endogenous $p27^{Kip1}$ locus.

5. The transgenic cell of claim 4, wherein the cell is heterozygous or homozygous for the mutant $p27^{Kip1}$ gene.

6. The transgenic cell of claim 1, wherein the cell is a primordial germ cell, an oocyte, egg, spermatocyte, sperm cell, fertilized egg, zygote, or embryonic stem cell.

7. The transgenic cell of claim 6, wherein the cell is an oocyte, fertilized egg, sperm cell or spermatocyte.

8. The transgenic cell of claim 1, comprising progeny of the cell of claim 1.

9. The transgenic cell of claim 1, wherein the cell is a somatic cell.

10. A non-human, transgenic animal which comprises a nucleic acid sequence encoding a mutant $p27^{Kip1}$ protein lacking a Cdk2 phosphorylation site.

11. The transgenic animal of claim 10, wherein the mutant $p27^{Kip1}$ protein is $p27^{T187A}$.

12. The transgenic animal of claim 10, wherein the transgenic animal is a primate, mammal, bovine, porcine, ovine, equine, avian, rodent, fowl, piscine, or crustacean.

13. The transgenic animal of claim 12, wherein the transgenic animal is a farm animal.

14. The transgenic animal of claim 13, wherein the farm animal is a chicken, cow, bull, horse, pig, sheep, goose or duck.

15. A transgenic, non-human animal whose genome comprises a $p27^{Kip1}$ gene and expresses a mutant $p27^{Kip1}$ polypeptide having a longer half-life in S phase than wildtype p27 polypeptide, wherein the expression results in increased size or growth rate of the animal.

16. The transgenic animal of claim 15, wherein the transgenic animal is a primate, mammal, bovine, porcine, ovine, equine, avian, rodent, fowl, piscine, or crustacean.

17. The transgenic animal of claim 15, wherein the transgenic animal is a farm animal.

18. The transgenic animal of claim 17, wherein the farm animal is a chicken, cow, bull, horse, pig, sheep, duck or goose.

19. A method for increasing the size or growth rate of a non-human, transgenic animal, comprising:

stably introducing into a genome of an animal cell a mutant $p27^{Kip1}$ gene lacking a Cdk2 phosphorylation site; and

producing an animal from the animal cell.

20. The method of claim 19, further comprising:

transferring a nucleus from the animal cell into a second cell from which an animal can be reconstituted;

and allowing the second cell to develop into an immature animal;

whereby the immature animal is larger than an immature animal not having the mutant $p27^{Kip1}$ gene.

21. The method of claim 20, wherein the second cell is an enucleated fertilized egg.

22. The method of claim 19, further comprising:

homologously integrating the mutant $p27^{Kip1}$ gene at an endogenous $p27^{Kip1}$ locus in the animal cell.

23. The method of claim 19, wherein the mutant $p27^{Kip1}$ gene is heterologous to the animal cell.

24. The method of claim 19, wherein mutant $p27^{Kip1}$ gene is integrated at a non-$p27^{Kip1}$ locus.

25. The method of claim 19, wherein the mutant $p27^{Kip1}$ gene encodes $p27^{T187A}$.

26. The method of claim 19, wherein the animal cell is a germ cell, a totipotent cell, a stem cell, an embryonic stem cell, a pluripotent stem cell, a somatic cell, or a fetal cell.

27. The method of claim 26, wherein the germ cell is a primordial germ cell, oocyte, egg, spermatocyte, sperm cell, fertilized egg, zygote or blastomere.

28. The method of claim 19, wherein the animal cell is from a vertebrate.

29. The method of claim 28, wherein the vertebrate is a primate, mammal, bovine, porcine, ovine, equine, avian, rodent, fowl, piscine, or crustacean.

30. The method of claim 29, wherein the vertebrate is a chicken, hen, rooster, cow, bull, duck or goose.

31. The method of claim 19, wherein the introducing is by electroporation, microinjection, lipofection, transfection or biolistics.

32. The method of claim 19, wherein the mutant $p27^{Kip1}$ gene comprises an expression cassette comprising a heterologous promoter operably associated with an open reading frame encoding $p27^{T187A}$ operably associated with a polyadenylation sequence.

33. The method of claim 19, wherein the mutant $p27^{Kip1}$ gene further comprises a selectable marker.

34. The method of claim 33, wherein the selectable marker is neo.

35. The method of claim 19, wherein the introducing is by a viral vector.

36. A method for making a large fowl, comprising:

introducing a mutant $p27^{Kip1}$ gene lacking a Cdk2 phosphorylation site into a genome of a fowl cell by contacting *in vivo* a blastodermal cell of a fertilized cell with the mutant $p27^{Kip1}$ gene, wherein the $p27^{Kip1}$ gene is introduced directly into the germinal disk of the egg.

37. The method of claim 36, wherein the fowl is a chicken, ostrich, emu, turkey, duck, goose, quail, parrot, parakeet, cockatoo or cockatiel.